# U.S. DEPARTMENT OF TRANSPORTATION PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

# FINAL ENVIRONMENTAL ASSESSMENT and FINDING OF NO SIGNIFICANT IMPACT

#### **Special Permit Information:**

Docket Number:	PHMSA-2019-0201
<b>Requested By:</b>	Columbia Gulf Transmission, LLC
Operator ID#:	2620
<b>Original Date Requested:</b>	October 15, 2019
Issuance Date:	March 31, 2022
Amended Date: <sup>1</sup>	May 22, 2023
Code Section(s):	49 CFR 192.611, 192.505(c), and 192.619(a)(2)

#### I. Background

The National Environmental Policy Act (NEPA), 42 U.S.C. 4321 - 4375 et seq., Council on Environmental Quality Regulations, 40 CFR 1500-1508, and U.S. Department of Transportation (DOT) Order No. 5610.1C, requires the Pipeline and Hazardous Materials Safety Administration (PHMSA) Office of Pipeline Safety (OPS)<sup>2</sup> to analyze a proposed action to determine whether the action will have a significant impact on the human environment. PHMSA analyzes special permit requests for potential risks to public safety and the environment that could result from PHMSA's decision to grant, grant with additional conditions, or deny the request. As part of this analysis, PHMSA evaluates whether a special permit would impact the likelihood or consequence of a pipeline failure as compared to the operation of the pipeline in full compliance with the pipeline

<sup>&</sup>lt;sup>1</sup> On June 22, 2022, CGT requested the addition of two (2) *special permit segments (62 and 63)* to the special permit, which are shown on **Table 1 – Special Permit Segments**.

<sup>&</sup>lt;sup>2</sup> References to PHMSA in this document means PHMSA OPS.

safety regulations. PHMSA's environmental review associated with the special permit application is limited to impacts that would result from granting or denying the special permit. PHMSA developed this assessment to determine what effects, if any, our decision would have on the environment.

Pursuant to 49 U.S.C. 60118(c) and 49 Code of Federal Regulations (CFR) 190.341, PHMSA may only grant special permit requests that are not inconsistent with pipeline safety. PHMSA will impose conditions in the special permit if PHMSA concludes they are necessary for safety, environmental protection, or are otherwise in the public interest. If PHMSA determines that a special permit would be inconsistent with pipeline safety or is not justified, the application will be denied.

The purpose of this final environmental assessment (FEA) is to comply with NEPA for the Columbia Gulf Transmission, LLC (CGT)<sup>3</sup> application for a special permit request to waive compliance from 49 CFR 192.611(a) "Change in class location: Confirmation or revision of maximum allowable operating pressure" for approximately 17.545 miles (92,637 feet) of 24-inch, 30-inch, and 36-inch diameter gas transmission pipelines located in the Columbia Gulf Mainline (ML) and Columbia Gulf East Lateral (EL) in the CGT system in Lafayette and Vermilion Parishes, Louisiana; Alcorn and Union Counties, Mississippi; Macon County, Tennessee; and Carter, Menifee, Montgomery, and Rowan Counties, Kentucky. This FEA and finding of no significant impact (FONSI) are prepared by PHMSA to assess the pipeline special permit request, in accordance with 49 CFR 190.341, and is intended to specifically analyze any environmental impact associated with the waiver of 49 CFR 192.611(a). This proposed special permit would waive 49 CFR 192.611(a) and requires CGT to implement additional requirements for the operations, maintenance, and integrity management of the approximately 17.545 miles (92,637 feet) of 24-inch, 30-inch, and 36-inch diameter pipelines located in Lafayette and Vermilion Parishes, Louisiana; Union and Alcorn Counties, Mississippi; Macon County, Tennessee; and Montgomery, Rowan, Menifee, and Carter Counties, Kentucky (special permit segments) and 730.2 miles of 24-inch, 30inch, and 36-inch diameter pipelines located in Lafayette and Vermilion Parishes, Louisiana;

<sup>&</sup>lt;sup>3</sup> CGT is a wholly owned subsidiary of TC Energy, Inc.

Alcorn and Union Counties, Mississippi; Macon County, Tennessee; and Carter, Menifee, Montgomery, and Rowan Counties, Kentucky (*special permit inspection areas*).

#### **II.** Introduction

Pursuant to 49 United States Code 60118(b) and 49 CFR 190.341, CGT submitted an application for a special permit to PHMSA on October 15, 2019, requesting that PHMSA waive the requirements of 49 CFR 192.611(a) to permit CGT to maintain the maximum allowable operating pressure (MAOP) of 43 *special permit segments* located in Lafayette and Vermilion Parishes, Louisiana; Alcorn and Union Counties, Mississippi; Macon County, Tennessee; and Carter, Menifee, Montgomery, and Rowan Counties, Kentucky, for which the class locations have changed from Class 1 to Class 2 and from Class 1 and 2 to Class 3.<sup>4</sup> Without the special permit, 49 CFR 192.611(a) would require CGT to replace the pipe segment, re-pressure test the pipe segments that have not undergone pressure tests for sufficient pressure and duration, or reduce the pipeline MAOP. However, pressure reduction was not a viable option for CGT because reducing MAOP would prevent CGT from meeting its contractual gas delivery obligations to customers. Under the special permit, CGT would implement alternative risk control measures and integrity management procedures in the *special permit inspection areas* and the *special permit segments*.

PHMSA is granting a special permit to waive certain regulatory requirements where it is consistent with pipeline safety. A special permit is typically conditioned on the performance of additional measures beyond minimum pipeline safety regulations, in accordance with 49 CFR 190.341.

#### **III. Regulatory Background**

Federal regulations at 49 CFR 192.611(a) require that an operator confirm or revise the MAOP of a pipe segment that is in satisfactory condition when the hoop stress of the segment is no longer commensurate with class location. Under 49 CFR 192.611(a), an operator may be required to reduce the operating pressure of a pipe segment, or alternatively, may have to replace the pipe in order to maintain the MAOP. Below is the relevant text of 49 CFR 192.611(a):

<sup>&</sup>lt;sup>4</sup> If there is pipe in a *special permit segment* that has not had a Class 1 to 3 location change, this pipe must be assessed in accordance with the special permit Conditions.

# 49 CFR 192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure.

(a) If the hoop stress corresponding to the established maximum allowable operating pressure of a segment of pipeline is not commensurate with the present class location, and the segment is in satisfactory physical condition, the maximum allowable operating pressure of that segment of pipeline must be confirmed or revised according to one of the following requirements:

(1) If the segment involved has been previously tested in place for a period of not less than 8 hours:

(i) The maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations, 0.667 times the test pressure in Class 3 locations, or 0.555 times the test pressure in Class 4 locations. The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(ii) The alternative maximum allowable operating pressure is 0.8 times the test pressure in Class 2 locations and 0.667 times the test pressure in Class 3 locations. For pipelines operating at alternative maximum allowable pressure per §192.620, the corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

(2) The maximum allowable operating pressure of the segment involved must be reduced so that the corresponding hoop stress is not more than that allowed by this part for new segments of pipelines in the existing class location.

(3) The segment involved must be tested in accordance with the applicable requirements of subpart J of this part, and its maximum allowable operating pressure must then be established according to the following criteria:

(i) The maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations, 0.667 times the test pressure for Class 3 locations, and 0.555 times the test pressure for Class 4 locations.

(ii) The corresponding hoop stress may not exceed 72 percent of the SMYS of the pipe in Class 2 locations, 60 percent of SMYS in Class 3 locations, or 50 percent of SMYS in Class 4 locations.

(iii) For pipeline operating at an alternative maximum allowable operating pressure per §192.620, the alternative maximum allowable operating pressure after the requalification test is 0.8 times the test pressure for Class 2 locations and 0.667 times the test pressure for Class 3 locations. The corresponding hoop stress may not exceed 80 percent of the SMYS of the pipe in Class 2 locations and 67 percent of SMYS in Class 3 locations.

The CGT pipelines have five (5) *special permit segments* that have not been tested for eight (8) hours or at or above 1.25 times the MAOP of the pipeline. Sections 192.611(a) and 192.505(c) require a pressure test for a minimum of eight (8) hours. Sections 192.611(a) and 192.619(a)(2) require a minimum pressure test factor of a minimum of 1.25 for a Class location change. The

*special permit segments* that do not meet the 1.25 test factor or the eight (8) hour test duration are listed in **Section VI** below.

#### **IV.** Purpose and Need

CGT requested a special permit to avoid having to replace approximately 17.545 miles (92,637 feet) of pipe located on five (5) pipelines in the Columbia Gulf Mainline and Columbia Gulf East Lateral in the CGT system. The Columbia Gulf Mainline (ML) consists of three (3) parallel pipelines, 30-inch diameter ML 100 Pipeline, 30-inch diameter ML 200 Pipeline, and 36-inch diameter ML 300 Pipeline, where the class locations have changed from Class 1 to Class 2 and from Class 1 and 2 to Class 3. The *special permit segments* within the Columbia Gulf East Lateral consists of two (2) pipelines, 24-inch diameter EL 200 Pipeline and 30-inch diameter EL 400 Pipeline, where the class locations have changed from Class 1 and Class 2 to Class 3 locations. This special permit consists of 43 *special permit segments* and waives the requirements of 49 CFR 192.611(a) with implementation of the special permit conditions. The class location change was identified by CGT as a result of the gathering of information regarding activities on and near the pipeline right-of-way. The pipeline *special permit segments* and *special permit inspection areas* have maximum allowable operating pressures (MAOP) of 935 pounds per square inch gauge (psig) (ML 100 Pipeline), 973 psig (EL 200 and EL 400 Pipelines), and 1,007 psig (ML 200 and ML 300 Pipelines). The *special permit inspection areas* are comprised of 24-inch, 30-inch, and 36-inch diameter pipelines constructed between 1953 and 1971. Attachments B (B-1 through B-5) and C (C-1 through C-13) are pipeline route maps showing the proposed special permit segments and special permit inspection areas.

#### V. Site Description

The CGT system is a major interstate natural gas transmission system that supplies natural gas to Louisiana, Mississippi, Tennessee, and Kentucky. Stretching about 3,368 miles in length, the CGT system connects to nearly every major pipeline in the Gulf Coast and to additional Midwestern pipelines. The *special permit segments* are located on five (5) pipelines in the CGT system in Columbia Gulf Mainline and Columbia Gulf East Lateral.

The Columbia Gulf Mainline in the CGT system runs from the Rayne Compressor Station, located approximately 15 miles west of Lafayette, Louisiana, to Kenova, West Virginia. The Columbia Gulf Mainline consists of three (3) parallel pipelines: (1) 30-inch diameter ML 100 Pipeline constructed in 1953 and 1954, (2) 30-inch diameter ML 200 Pipeline constructed between 1958 and 1965, and (3) 36-inch diameter ML 300 Pipeline construction between 1968 and 1971.

The Columbia Gulf East Lateral runs from Rayne Compressor Station, located approximately 15 miles west of Lafayette, Louisiana, to various points east of Lafayette, Louisiana, along the Gulf Coast. The 24-inch diameter EL 200 Pipeline was constructed in 1954 and the 30-inch diameter EL 400 Pipeline was constructed in 1971.

The *special permit inspection areas* contain 57 high consequence areas (HCAs), which are calculated by Method 2 (49 CFR 192.903). The *special permit segments* traverse agriculture fields and low to medium density residential development and are in the vicinity of several wetlands.

#### VI. Special Permit Segments and Special Permit Inspection Areas

On the condition that CGT complies with the terms and conditions set forth below, the special permit waives compliance from 49 CFR 192.611(a) for approximately 17.545 miles (92,637 feet) of natural gas transmission pipeline on the 24-inch, 30-inch, and 36-inch diameter pipelines, where the class locations of the pipelines changed from Class 1 to Class 2 locations<sup>5</sup> and Class 1 to Class 3 locations in Lafayette and Vermilion Parishes, Louisiana; Union and Alcorn Counties, Mississippi; Macon County, Tennessee; and Montgomery, Rowan, Menifee, and Carter Counties, Kentucky.

This special permit will allow CGT to maintain the current 935 psig (ML 100 Pipeline), 973 psig (EL 200 and EL 400 Pipelines), and 1,007 psig (ML 200 and ML 300 Pipelines) MAOP in the *special permit segments*.

#### Special Permit Segments:

This special permit applies to the *special permit segments* in **Table 1 – Special Permit Segments** and are identified using the CGT survey station (SS) references.

<sup>&</sup>lt;sup>5</sup> Class 2 locations are required to have a pressure test at 1.25 or greater times MAOP and for eight (8) hours to meet 49 CFR 192.611(a).

	Table 1 – Special Permit Segments								
Special Permit Segment Number	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (SS)	End Survey Station (SS)	County or Parish, State	Year Installed	Seam Type	MAOP (psig)
16	24	EL 200	1,453	479+60	494+13	Lafayette, LA	1954	DSAW	973
2	24	EL 200	5,226	502+25	554+51	Lafayette, LA	1954	DSAW	973
3	24	EL 200	73	559+86	560+59	Lafayette, LA	1954	DSAW	973
4	24	EL 200	659	638+76	645+35	Lafayette, LA	1954	DSAW	973
5	24	EL 200	2,204	716+07	738+11	Lafayette, LA	1954	DSAW	973
7	30	EL 400	1,455	470+13	484+68	Lafayette, LA	1971	EFW / DSAW	1,007
8	30	EL 400	2,882	489+52	518+34	Lafayette, LA	1971	EFW / DSAW	1,007
10	30	ML 100	4,928	2006+68	2055+96	Union, MS	1954	DSAW	935
13	30	ML 100	70	4170+48	4171+18	Alcorn, MS	1954	DSAW	935
14	30	ML 100	3,119	4223+87	4255+06	Alcorn, MS	1954	DSAW	935
15	30	ML 100	1,873	4382+15	4400+88	Alcorn, MS	1954	DSAW	935
16	30	ML 100	1,259	338+43	351+02	Macon, TN	1954	DSAW	935
17	30	ML 100	2,637	395+56	421+93	Macon, TN	1954	DSAW	935
18	30	ML 100	1,008	335+67	345+75	Montgomery, KY	1954	DSAW	935
19	30	ML 100	62	397+23	397+85	Menifee, KY	1954	DSAW	935
20	30	ML 100	5,080	2737+94	2788+74	Carter, KY	1954	DSAW	935
21	30	ML 100	2,363	3434+23	3457+86	Carter, KY	1954	DSAW	935
22	30	ML 100	418	3467+65	3471+83	Carter, KY	1954	DSAW	935
23	30	ML 100	535	3504+57	3509+92	Carter, KY	1954	DSAW	935
24	30	ML 100	1,501	3515+84	3530+85	Carter, KY	1954	DSAW	935
28	30	ML 200	4,638	2010+42	2056+80	Union, MS	1962	DSAW	1,007
30	30	ML 200	80	4172+12	4172+92	Alcorn, MS	1965	EFW	1,007
31	30	ML 200	3,179	4225+85	4257+64	Alcorn, MS	1965	EFW / DSAW	1,007
32	30	ML 200	2,072	4384+22	4404+94	Alcorn, MS	1965	EFW	1,007
41	30	ML 200	2,780	323+05	350+85	Macon, TN	1958	DSAW	1,007
42	30	ML 200	2,609	396+05	422+14	Macon, TN	1958	DSAW	1,007
43	30	ML 200	185	1682+05	1683+90	Rowan, KY	1958	DSAW	1,007
44	30	ML 200	803	352+15	360+18	Montgomery, KY	1958	DSAW	1,007
45	30	ML 200	199	410+91	412+90	Menifee, KY	1958	DSAW	1,007
46	30	ML 200	2,771	2631+97	2659+68	Carter, KY	1963	DSAW	1,007
47	30	ML 200	4,104	2669+90	2710+94	Carter, KY	1963	DSAW	1,007
49	30	ML 200	6,564	2745+20	2810+84	Carter, KY	1963	DSAW	1,007
50	30	ML 200	3,269	2937+69	2970+38	Carter, KY	1963	DSAW	1,007
51	30	ML 200	2,440	3441+88	3466+28	Carter, KY	1964	DSAW	1,007

<sup>6</sup> On June 28, 2022, CGT notified PHMSA that existing *special permit segments 1 and 54* had been extended a total of 63 feet through the implementation of **Condition 17**.

Table 1 – Special Permit Segments									
Special Permit Segment Number	Outside Diameter (inches)	Line Name	Length (feet)	Start Survey Station (SS)	End Survey Station (SS)	County or Parish, State	Year Installed	Seam Type	MAOP (psig)
52	30	ML 200	439	3475+58	3479+97	Carter, KY	1964	DSAW	1,007
53	30	ML 200	450	3512+64	3517+14	Carter, KY	1964	DSAW	1,007
54	30	ML 200	1,439	3523+50	3537+89	Carter, KY	1964	DSAW	1,007
55	36	ML 300	4,595	2006+61	2052+56	Union, MS	1969	EFW	1,007
57	36	ML 300	1,940	4379+19	4398+59	Alcorn, MS	1970	EFW	1,007
60	36	ML 300	2,801	319+80	347+81	Macon, TN	1968	DSAW	1,007
61	36	ML 300	2,606	393+46	419+52	Macon, TN	1968	DSAW	1,007
62	24	EL 200	953	1279+77	1289+30	Vermilion, LA	1954	DSAW	973
63	30	ML 100	2,853	1752+72	1781+25	Rowan, KY	1954	DSAW	935

Note: **DSAW** is double submerged arc welded pipe seam.

**EFW** is electric flash weld pipe seam.

This special permit applies to the *special permit segments* located in Lafayette and Vermilion Parishes, Louisiana; Union and Alcorn Counties, Mississippi, Macon County, Tennessee; and Montgomery, Rowan, Menifee, and Carter Counties, Kentucky as detailed in **Table 2 – Special Permit Segment Mileage by County.** 

Table 2 – Special Permit Segment Mileage by County							
State	County or Parish	Outside Diameter (inches)	Line Name	Length (feet)	Total (Miles)		
	Lafavette Parish	24	EL 200	9,615	2 64		
Louisiana		30	EL 400	4,337	2.04		
	Vermilion Parish	24	EL 200	953	0.180		
		30	ML 100	5,062	_		
	Alcorn County	30	ML 200	5,331	2.34		
Mississippi		36	ML 300	1,940			
	Union County	30	ML 100	4,928			
		30	ML 200	4,638			
		36	ML 300	4,595			
		30	ML 100	3,896	2.78		
Tennessee	Macon County	30	ML 200	5,389			
		36	ML 300	5,407			
	Carter County	30	ML 100	9,897			
		30	ML 200	21,476	3.94		
	Manifaa County	30	ML 100	62	0.049		
Kontuoku	Mennee County	30	ML 200	199	0.049		
Kentucky	Montgomory County	30	ML 100	1,008	0.278		
	Monigomery County	30	ML 200	803	0.378		
	Power County	30	ML 100	2,853	0.575		
	Kowan County	30	ML 200	185	0.575		

#### **Special Permit Inspection Areas**:

The *special permit inspection areas* are defined as areas that extend 220 yards on each side of the centerline as listed in **Table 3 – Special Permit Inspection Areas**.

Table 3 – Special Permit Inspection Areas									
Special Permit Inspection Area Number	Special Permit Segment(s) Included	Outside Diameter (inches)	Line Name	Description	Start Survey Station (SS)	End Survey Station (SS)	Length <sup>7</sup> (miles)		
1	1, 2, 3, 4, 5, 62	24	EL 200	Rayne CS to Valve 1204	9+06	1339+26	25.2		
2	7, 8	30	EL 400	Rayne CS to Valve 1203	0+00	751+22	14.2		
4	10, 13, 14, 15	30	ML 100	Banner to Corinth	0+14	4506+36	85.3		
5	16, 17	30	ML 100	Hartsville to Clementsville	0+02	4595+65	87.0		
6	18, 19, 20, 21, 22, 23, 24, 63	30	ML 100	Stanton to Leach	0+00	4547+33	86.1		
8	28, 30, 31, 32	30	ML 200	Banner to Corinth	3+60	4510+80	85.4		
9	41, 42	30	ML 200	Hartsville to Clementsville	0+00	4625+30	87.6		
11	43, 44, 45, 46, 47, 49, 50, 51, 52, 53, 54	30	ML 200	Stanton to Leach	0+00	4565+02	86.5		
12	55, 57	36	ML 300	Banner to Corinth	0+00	4505+01	85.3		
13	60, 61	36	ML 300	Hartsville to Clementsville	0+13	4622+50	87.5		

#### High Consequence Areas:

HCAs located in the *special permit inspection areas* are detailed in **Table 4 – High Consequence Areas**.

	Table 4 – High Consequence Areas							
Special Permit Inspection Area Number	Line Name	Start Survey Station (SS)	End Survey Station (SS)	Length (miles)				
		567+60	582+71	0.286				
		587+08	612+50	0.481				
		647+89	690+75	0.812				
		694+86	713+01	0.344				
1	EL 200	757+35	773+23	0.301				
		796+61	823+08	0.501				
		824+44	927+52	1.952				
		966+81	989+55	0.431				
		1295+04	1311+65	0.315				
		496+83	526+52	0.562				
2	EL 400	554+99	574+12	0.362				
2		577+16	606+14	0.549				
		637+04	709+49	1.372				
		1976+08	2020+83	0.848				
4	ML 100	2031+90	2057+21	0.479				
		4182+27	4233+80	0.976				

<sup>&</sup>lt;sup>7</sup> If the *special permit inspection area* footage does not extent from launcher to receiver, then the *special permit inspection area* would need to be extended.

Table 4 – High Consequence Areas							
Special Permit Inspection Area Number	Line Name	Start Survey Station (SS)	End Survey Station (SS)	Length (miles)			
		4274+23	4292+36	0.343			
		4329+76	4363+93	0.647			
		359+50	387+92	0.538			
5	ML 100	3628+87	3658+04	0.552			
		4450+94	4473+92	0.435			
		361+37	395+23	0.641			
		1171+00	1192+75	0.412			
		1400+35	1419+89	0.370			
		1660+44	1779+26	2.250			
	MI 100	1803+03	1830+01	0.511			
6	ML 100	1837+78	1864+45	0.505			
		2414+56	2441+06	0.502			
		2725+79	2744+53	0.355			
		3459+51	3540+28	1.530			
		4253+77	4272+65	0.358			
		1984+73	2021+96	0.705			
8		2030+54	2058+52	0.530			
	ML 200	4184+07	4236+01	0.984			
		4274+89	4294+71	0.375			
		4325+08	4371+15	0.873			
		358+13	389+50	0.594			
9	ML 200	3634+91	3664+16	0.554			
		4481+64	4504+74	0.438			
		374+95	411+40	0.690			
		1181+35	1205+25	0.453			
		1411+26	1429+11	0.338			
		1668+83	1789+53	2.286			
11	ML 200	1811+69	1839+27	0.522			
		2421+81	2447+43	0.485			
		2732+64	2752+70	0.380			
		3466+74	3549+51	1.568			
		4270+64	4286+98	0.309			
		1968+51	2057+44	1.684			
		3845+19	3864+49	0.366			
12	ML 300	4173+29	4233+78	1.146			
		4265+26	4301+41	0.685			
		4323+61	4374+08	0.956			
13	ML 300	352+34	392+19	0.755			

Table 4 – High Consequence Areas						
Special Permit Inspection Area Number	Line Name	Start Survey Station (SS)	End Survey Station (SS)	Length (miles)		
		501+11	523+73	0.428		
		3630+58	3665+52	0.662		
		4478+33	4508+82	0.577		

The special permit waives the requirements of 49 CFR 192.611(a), allowing CGT to maintain the existing MAOP and implement special permit conditions for the approximately 17.545 miles (92,637 feet) of pipelines without having to replace existing pipe in the *special permit segments*.

PHMSA grants this special permit based on this document, which can be read in its entirety in Docket No. PHMSA-2019-0201 in the Federal Docket Management System (FDMS) located at <u>www.regulations.gov</u>.

#### VII. ALTERNATIVES

#### Alternative 1: "No Action" Alternative

Denial of the special permit would require the replacement and pressure testing of all the pipeline segments associated with this special permit request, which includes approximately 17.545 miles of mainline pipe. If CGT opted not to replace these *special permit segments*, 49 CFR 192.611 requires a reduction in the pipeline MAOP.<sup>8</sup>

#### Alternative 2: "Selected" Alternative

PHMSA is granting the special permit with conditions, and CGT is allowed to continue to operate at the current 935 psig (ML 100 Pipeline), 973 psig (EL 200 and EL 400 Pipelines), and 1,007 psig (ML 200 and ML 300 Pipelines) MAOP in the Class 2 and Class 3 locations for 43 *special permit segments* without replacing pipe while complying with the special permit conditions, as described below.

<sup>&</sup>lt;sup>8</sup> These regulatory options are specified in 49 CFR 192.611 Change in class location: Confirmation or revision of maximum allowable operating pressure.

#### **VIII.** Overview of the Special Permit Conditions:

To provide an equivalent level of safety in the absence of either lowering the pipeline operating pressure or upgrading the pipe, this special permit has additional operations and maintenance requirements (conditions) which are intended to decrease the likelihood of a release of gas. PHMSA believes that these additional measures, designed to prevent leaks and ruptures, will ensure that the special permit is not inconsistent with pipeline safety. This section provides an overview of the special permit conditions. For CGT specific technical requirements, the special permit with conditions granted to CGT for Docket No. PHMSA-2019-0201 can be found in the FDMS located on the internet at <u>www.regulations.gov</u> or on the PHMSA website for special permits issued at <u>https://www.phmsa.dot.gov/pipeline/special-permits-state-waivers/special-permits-issued</u>.

#### 1) Current Status of Pipe in the Ground

To ensure that key characteristics of the pipe currently installed in each *special permit segment* is known, records that confirm pipe specifications, successful pressure tests, and girth weld nondestructive tests are required. Should records be unavailable or unacceptable, additional activities as detailed in the special permit must be completed. If these additional activities are not completed or should pipe be discovered that does not meet specific requirements of eligibility, the *special permit segment* must be replaced.

#### 2) **Operating Conditions**

The *special permit inspection areas* must continue to be operated at or below the existing maximum allowable operating pressure (MAOP) until a restoration or uprating plan has been approved, if allowed by the special permit. To ensure compliance with special permit conditions, the operator's Operations and Maintenance (O&M) manual, Integrity Management Program (IMP), and Damage Prevention (DP) program must be modified to implement the special permit conditions. In addition, PHMSA must approve any long-term flow reversals that would impact *special permit segment(s)*.

#### 3) Threat Management

Threats are factors that can lead to the failure of a pipeline. Activities are required to identify, assess, remediate, and monitor threats to the pipeline.

a) **General activities.** CGT must perform annual data integration and identification of threats to which the *special permit inspection areas* are susceptible. These activities must include

integrity assessments with specific inline inspection (ILI) tools, strict anomaly repair criteria, and appropriate environmental assessment and permitting. Additional integrity assessment methodologies may be used if allowed by the special permit. Integrity assessments must then be conducted periodically at an interval determined in the special permit for each threat identified.

- b) External corrosion control requirements. The special permit requires additional activities to monitor and mitigate external corrosion. These activities include installation and annual monitoring of cathodic protection (CP) test stations, periodic close interval surveys (CIS), and clearing or remediating shorted casings that may impede CP effectiveness. These activities ensure the appropriate level of CP is reaching the pipeline in areas where coating loss or damage has occurred in order to prevent or mitigate external corrosion. In addition, CGT will be required to develop and implement a plan that identifies and remediates interference from alternating or direct current (AC/DC) sources (such as high-voltage powerlines) that could adversely impact the effectiveness of CP.
- c) **Internal corrosion control requirements.** The special permit includes gas quality specifications to mitigate internal corrosion because internal corrosion is highly dependent on the quality of the gas transported within the pipeline.
- d) Stress corrosion cracking (SCC) requirements. To ensure that stress corrosion cracking (SCC) is discovered and remediated, any time a pipe segment is exposed during an excavation CGT must examine coating to determine type and condition. If the coating is in poor condition, CGT must conduct additional SCC analysis. If SCC is confirmed, CGT must implement additional special permit defined remediation and mitigation.
- e) Pipe seam requirements. CGT must perform an engineering integrity analysis to determine susceptibility to seam threats. CGT must re-pressure test any *special permit segments* with an identified seam to ensure the issue is not systemic in nature.
- f) External pipe stress requirements. Upon identification of any source of external stress on the pipeline (such as soil movement), CGT must develop procedures to evaluate and periodically monitor these stresses.
- g) **Third-party specific requirements.** To assist in identifying the pipeline location and minimizing the chance of accidental pipeline strikes, CGT must install and maintain line-of-

site markers for the pipeline. CGT must perform mitigation activities for any location where a depth-of-cover survey shows insufficient soil cover.

#### 4) Consequence Mitigation

To ensure quick response and decreased adverse outcome in the event of a failure, each side (upstream and downstream) of the *special permit segment* must have and maintain operable automatic shutdown valves (ASV) or remote-controlled valves (RCV). CGT must monitor valves through a control room with a supervisory control and data acquisition (SCADA) system. In addition to the mainline valves, should a crossover or lateral connect between the valve locations, additional isolation valves may be required.

#### 5) Post Leak or Failure

If the *special permit inspection area* experiences an in-service or pressure test leak/failure, CGT must conduct a root cause analysis to determine the cause. If the cause is determined to be systemic in nature, CGT must implement a remediation plan or the *special permit segment* must be replaced, as determined by the special permit specific conditions.

#### 6) Class Location Study and Potential Extension of Special Permit Segment

CGT must conduct a class location study at an interval specified in the special permit. This allows CGT to quickly identify extended locations that must comply with the *special permit segment* requirements. CGT may extend the *special permit segments* with proper notification, update of the FEA, and implementation of all requirements in the special permit.

#### 7) PHMSA Oversite and Management

PHMSA maintains oversight and management of each special permit. This includes annual meetings with executive level officers on special permit implementation status, written certification of the special permit, special permit required notification of planned activities, notification of root cause analysis results, and notification prior to certain excavation activities so that PHMSA may observe.

#### 8) Gas Leakage Surveys and Remediation

The *special permit segment* and *special permit inspection area* have requirements in the special permit to conduct leakage surveys more frequently than is presently required in 49 CFR 192.706. Gas leakage surveys using instrumented gas leakage detection equipment must be conducted along each *special permit segment* and at all valves, flanges, pipeline tie-ins with valves and flanges, ILI launcher, and ILI receiver facilities in each *special permit inspection* 

*area* at least twice each calendar year, not to exceed 7½ months. The type of leak detection equipment used, survey findings, and remediation of all instrumented gas leakage surveys must be documented by operator. The special permit will require a three-step grading process with a time interval for remediation based upon the type of leak.

#### 9) **Documentation**

CGT must maintain documentation that supports compliance with special permit conditions for the life of the pipeline.

#### IX. AFFECTED RESOURCES AND ENVIRONMENTAL CONSEQUENCES

# A. Affected Resources and Environmental Consequences of the Proposed Action and the No Action Alternatives

*Aesthetics:* The only permanent visual impact of the "Selected" Alternative will be the installation of line-of-sight markers that are placed to reduce the risk of third-party damage. Increased maintenance activities, including temporary excavations, could cause temporary visual impacts. These impacts are expected to be significantly shorter in duration than removal and replacement of the existing pipeline. Maintenance activities and line of sight markers have a minimal impact on the visual character of the *special permit segments* right-of-way. Pipe replacement under the "No Action" Alternative would require removal of the existing pipe and installation of a new pipe. This would result in the use of heavy equipment and ground disturbance. Therefore, the "Selected" Alternative will have less aesthetic impacts to the affected *special permit segments*.

*Agricultural Resources:* The right-of-way of the *special permit segments* is mainly in rural areas and dominated by agricultural fields with low intensity residential development, except in the vicinity of the *special permit inspection areas* in Union County, Mississippi, the areas are urbanized with residential development to the west of the *special permit segments*. The "Selected" Alternative could result in increased maintenance activities due to more stringent maintenance requirements than would otherwise be required under Part 192. These maintenance activities could potentially interfere with some agricultural activities, but these activities will have a significantly smaller footprint than a pipe removal and replacement and will be temporary in duration. The *special permit segments* will not impact any agricultural resources. The "No Action" Alternative

would require pipe replacement and would cause disturbance to farm operations adjacent to the segment.

*Air Quality:* The "Selected" Alternative could potentially have minimal impacts on air quality in the *special permit inspection areas* due to surveillance, assessment, and maintenance activities required by the permit. The "No Action" Alterative would require that approximately 3.164 miles of *special permit segments* (e.g., *special permit segments 46 through 50*) must have a pressure tests because those segments have not undergone a pressure test at the required pressure and/or duration. In order to conduct pressure tests, the above listed *special permit segments* will first need to be emptied of all gas, a process known as "blow down." For the "No Action" Alternative, pipe replacement would be required, which would necessitate blowing down all the pipeline between the isolation mainline valves that are located on the upstream and downstream endpoints of the *special permit segments*, which would release unburned natural gas, a pollutant and greenhouse gas (GHG). The "No Action" Alternative would have more substantial impacts on air quality because more length of pipeline would require blowdown and because of additional emissions that would be temporarily caused by equipment use during excavation, pipe removal, pipe replacement, and pipe installation.

*Biological Resources:* The primary wildlife habitat occurring within, and in the vicinity of, the *special permit segments* and *special permit inspection areas* is composed of various land cover types, including deciduous, mixed, and coniferous forests, residential areas, agricultural fields, and waterbody features. Several wetlands are present in the vicinity of the *special permit inspection areas* in Kentucky. Granting the special permit could result in increased surveillance, assessment, and maintenance activities but will not result in permanent modifications to any habitat, or impact wetlands or waterbodies, and will have no significant effect on fishery resources or essential fish habitats (EFH). The special permit will not trigger any notification or permitting requirements from Coastal Zone Management.

According to the Fish & Wildlife Service (FWS) Information for Planning and Conservation (IPaC) website,<sup>9</sup> 11 types of federally listed threatened species are recognized as may be present in the area within the *special permit segments*, including Wood Stork, Snuffbox Mussel, Price's Potato-bean,

<sup>&</sup>lt;sup>9</sup> Information for Planning and Conservation (IPaC). FWS website. Available at <u>https://ecos.fws.gov/ipac/</u>. Accessed September 2018.

Running Buffalo Clover, Short's Bladderpod, Whorled Sunflower, Mitchell's Satyr Butterfly, Gray Bat, Indiana Bat, Northern Long-eared bat and Virginia Big-eared Bat. No lands enrolled in the Conservation Reserve Program (CRP) or the Wetland Reserve Program (WRP), both administered by the Natural Resource Conservation Service (NRCS), will be affected by granting this special permit.

Any activities related to the *special permit segments* will be conducted within the boundaries of the previously disturbed pipeline right-of-way. CGT will request no effect concurrence from the United States Fish and Wildlife Service Twin Cities Ecological Services Field Office for any proposed future work by CGT to be undertaken within its existing, previously disturbed right-of-way to ensure compliance with Section 9 of the Endangered Species Act (ESA). Replacement of line pipe in the *special permit segments* would result in increased disturbance to wildlife habitat, though that disturbance would also be temporary and limited in nature.

*Climate Change:* The activities associated with the *special permit segments* could cause increased monitoring and repair activities, which will result in the release of GHG, especially through the emissions of excavation and other equipment needed to perform maintenance activities. The special permit conditions require that approximately 3.164 miles of special permit segments (e.g. special permit segments 46 through 50) must have a pressure test because those segments have not undergone a pressure test at the required pressure and/or duration. In order to conduct pressure tests, the above listed *special permit segments* will first need to undergo blow down. Blow downs result in the release of unburned methane, which is a potent GHG. Under the terms of the special permit, the remaining special permit segments will not require blow down. However, with the "No Action" Alternative, pipe replacement would be required, which would necessitate blowing down all of the segments that have undergone class location change, also known as the *special permit* segments, resulting in a greater release of unburned natural gas, a known GHG. Pipeline replacement would also result in increased emissions from manufacture of new pipe, transportation of materials, and construction activities related to pipeline replacement. Increased pipeline maintenance activities could result in increased emissions, but these emissions are likely substantially less than what would result from pipeline removal, manufacture, transportation, and replacement.

*Cultural Resources:* Any activities associated with the *special permit segments* will be conducted within the boundaries of the previously disturbed pipeline right-of-way. Publicly available information obtained from the Tennessee Historical Commission (THC) historic resource viewer was used to identify previously recorded cultural resources within one-mile of the *special permit* segments in Macon County, Tennessee. The THC documents 25 structures. All of the structures have been determined to be not eligible for inclusion in the National Register of Historic Places (NRHP) (THC 2019). According to the Kentucky Office of State Archaeology (KOSA) in 2019, there are 17 historic structures located within a one-mile radius of the *special permit segments* in Rowan County, Kentucky; however, none of the structures intersect the current alignment or are within 300 feet of the current alignment. Publicly available information obtained from the Mississippi Department of Archives and History (MDAH) was used to identify previously recorded cultural resources within one-mile of the special permit segments in Union County and Alcorn County, Mississippi. The MDAH documents seven (7) structures. All other Counties, where the special permit segments are located, have not identified historic structures resources within a onemile radius of the associated *special permit segments*. No new ground disturbing activities will occur as part of the special permit request; therefore, this request will not impact cultural resources.

*Environmental Justice:* The "Selected" Alternative will not have an adverse impact on the local population. According to US Census data from 2019 for the census block groups<sup>10</sup> where the *special permit inspection areas* are located, the minority population in the census block group(s) in Lafayette Parish, Louisiana, has 17 percent; Union County, Mississippi, has 16 percent; Alcorn County, Mississippi, has up to 5 percent; Macon County, Tennessee, has 2 percent; Menifee County, Kentucky, has up to 2 percent; Rowan County, Kentucky, has 2 percent; Carter County, Kentucky, has up to 10 percent; and Montgomery County, Kentucky, has up to 36 percent. None of the census block groups have a per capita income below the national poverty threshold.

The activities of the special permit are intended to maintain safety along special permit segments, reduce environmental impacts, and increase the level of safety along the *special permit inspection areas*. The special permit is intended to maintain or increase safety overall with the implementation of safety conditions in the *special permit segments*. Many special permit conditions also apply to

<sup>&</sup>lt;sup>10</sup> U.S. Census Bureau (USCB). 2019. American Fact Finder. Available at: <u>https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml</u>. Accessed August 2019.

the *special permit inspections areas* and will not have a disparate impact on any minority, low income, or non-English language populations. This special permit will also reduce climate change impacts, and low-income and minority communities are understood to be more susceptible to the risks associated with climate change.

Therefore, consistent with DOT Order 5610.2C ("Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations") and Executive Orders 12898 ("Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations"), 13985 ("Advancing Racial Equity and Support for Underserved Communities Through the Federal Government"), 13990 ("Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis"), and 14008 ("Tackling the Climate Crisis at Home and Abroad"), 12898 and DOT Order 5610.2(a), Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, PHMSA does not anticipate that the special permit will result in disproportionately high and adverse effects on minority or low-income populations.

 Table 5 - Demographic Information for Special Permit Segment – Using EPA EJScreen

 provides information regarding the population surrounding the additional *special permit* 

 segments.<sup>11</sup>

Table 5 - Demographic Information for Special Permit Segments – Using EPA EJScreen								
Special Permit Segment	State	County / Parish	Total Population (Along Special Permit Segment)	Minority*/People of Color** Population	Low Income Population	Linguistically Isolated		
62	LA	Vermilion	141	15%	35%	0%		
63	KY	Rowan	99	4%	62%	0%		
Minority*: The term minority is used in the currently active DOT Environmental Justice Order 5610.2(a), available at: <a href="https://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/index.cfm">https://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/orders/order_56102a/index.cfm</a> People of Color**: The term people of color is used in EPA's Environmental Justice Screening and mapping tool (EJSCREEN). An overview of demographic indicators through EJSCREEN is available at: <a href="https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen">https://www.epa.gov/ejscreen/overview-demographic-indicators-ejscreen</a>								

<sup>&</sup>lt;sup>11</sup> The special permit issued March 31, 2022 did not require the completion of Table 5. This is a new requirement that was implemented for the amended *special permit segments 62 and 63*.

#### Geology, Soils, and Mineral Resources:

#### Lafayette Parish, Louisiana

The *special permit inspection areas* in Lafayette Parish, Louisiana have flat topography and predominant grassland vegetation. The region is predominantly used for agriculture and has been increasingly developed by urban and industrial industries due to oil and gas expansion. The soils are covered with loess veneer correlated with the Mississippi Valley floodplains. The *special permit inspection areas* are comprised of rock types primarily by prairie terraces with somewhat poorly drained, moderately slowly permeable soils that formed in loess, mainly on the terrace upland.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 4 to 8 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e).<sup>12</sup> Earthquakes in this region project intensities that exceed I to VIII on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the area will not be affected.

#### Union County, Mississippi

The *special permit inspection areas* in Union County, Mississippi, are predominantly forested and contain a mosaic of plains with cropland, pastures, and isolated woodland and forest areas. The soil types vary from poorly drained soils to well-drained soils. According to the USGS National Geologic Map Database (USGS 2019c),<sup>13</sup> the geology of the *special permit inspection areas* is comprised of rock types primarily from the Ripley formation.

<sup>&</sup>lt;sup>12</sup> U.S. Geological Survey (USGS). 2013. Federal Standards and Procedures for the National Watershed Boundary Dataset (WBD). Chapter 3 of Section A, Federal Standards. Book 11 Collection and Delineation of Spatial Data. Techniques and Methods 11-A3. 4th. ed. Available at: <u>https://pubs.usgs.gov/tm/11/a3/pdf/tm11-a3.pdf</u>. Accessed August 2019.

<sup>&</sup>lt;sup>13</sup> U.S. Geological Survey (USGS). 2013. Federal Standards and Procedures for the National Watershed Boundary Dataset (WBD). Chapter 3 of Section A, Federal Standards. Book 11 Collection and Delineation of Spatial Data. Techniques and Methods 11-A3. 4th. ed. Available at: <u>https://pubs.usgs.gov/tm/11/a3/pdf/tm11-a3.pdf</u>. Accessed August 2019.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 14 to 20 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed VI on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

#### Alcorn County, Mississippi

The *special permit inspection areas* in Alcorn County, Mississippi, are predominantly forested and traversed by low to moderate gradient streams with sandy substrates. The soil types within the region are considered somewhat poorly drained and strongly acidic. According to the USGS National Geologic Map Database (USGS 2019c), the geology of the *special permit inspection areas* is comprised of rock types primarily from Coffee Sand of the Selma Group.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 20 to 30 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed VI on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

#### Macon County, Tennessee

The *special permit inspection areas* in Macon County, Tennessee, are characterized as tablelands, with moderate relief and irregular plains. The region is a transitional zone for vegetation between the oak-hickory forests of the west with the mixed mesophytic forests of the Appalachian Mountains to the east. The soil types within the region are very deep, moderately well-drained soils that have a slowly permeable fragipan in the subsoil.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 10 to 14 percent ground acceleration would occur near the *special permit* 

PHMSA-2019-0201 – Columbia Gulf Transmission, LLC FEA and FONSI – Class 1 to Class 3 Location – KY, LA, MS, and TN *inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed VI on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

#### Menifee and Montgomery Counties, Kentucky

The *special permit inspection areas* in Menifee and Montgomery Counties, Kentucky, are primarily forested and predominantly underlain by unglaciated and carboniferous sedimentary rock. The topography is highly variable, containing hills and ridges, cliffs in the south, narrow valleys with high gradient streams, and swampy bottomlands. The soils in the region are deep and well-drained.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 10 to 14 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed VI on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

#### Rowan County, Kentucky

The *special permit inspection areas* in Rowan County, Kentucky, are primarily forested and predominantly underlain by unglaciated and carboniferous sedimentary rock. The topography is highly variable, containing hills and ridges, cliffs in the south, narrow valleys with high gradient streams, and swampy bottomlands. The soils in the region are deep and well-drained.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 6 to 19 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed IV to VI on the Modified Mercalli Intensity Scale. With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

#### Carter County, Kentucky

The *special permit inspection areas* in Carter County, Kentucky, are primarily forested and exhibits a mosaic of woodland, pastureland, and cropland. The region is composed of hills, ridges, fewer cliffs, and narrow valleys. The streams are generally higher gradient and support a high diversity of fish, mussels, and diatom species. The soils in the region are well-drained.

Earthquakes are identified as a seismic hazard within the *special permit inspection areas*. According to the USGS Seismic Hazards maps, there is a 2 percent probability in 50 years that a seismic event with 6 to 10 percent ground acceleration would occur near the *special permit inspection areas* (USGS 2014e). Earthquakes in this region project intensities that exceed IV to VI on the Modified Mercalli Intensity Scale.

With the "Selected" Alternative no construction-related activities will occur; therefore, the topography in the *special permit segments* will not be affected.

*Indian Trust Assets:* According to the U.S. Department of Interior, Bureau of Indian Affairs (2016),<sup>14</sup> there are no federally recognized Indian tribes or tribal reservations in the counties with pipeline segments. Any work associated with the *special permit segments* and *special permit inspection areas* will have no impact to Indian Trust Assets or federally recognized Tribal Reservations. The scope and duration of any compliance work resulting from the special permit will have little to no effect or impact on the socioeconomics in the surrounding area.

*Land Use:* Minimal ground disturbance or modifications to CGT system along the *special permit segments* and *special permit inspection areas* will occur as part of the special permit from increased maintenance activities. The "Selected" Alternative will not impact land use or planning and does not require permits from local governments.

*Noise:* The scope and duration of any activities associated with the *special permit segments* and *special permit inspection areas* will have little to no impact on noise levels in the vicinity of the

<sup>&</sup>lt;sup>14</sup> U.S. Department of Interior, Bureau of Indian Affairs. 2016. Indian Lands of the Federally Recognized Tribes of the United States. Available at <u>https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/webteam/pdf/idc1-028635.pdf</u>. Accessed August 2019.

pipeline. The "No Action" Alternative would result in temporary increases in noise during the replacement of the existing pipe.

*Recreation:* The scope and duration of any activities associated with the *special permit segments* and *special permit inspection areas* will have little to no impact on recreation in the vicinity of the pipeline. The "No Action" Alternative would result in temporary increases in disturbances to recreational activities. during the replacement of the existing pipe.

*Safety:* The Federal Pipeline Safety Regulations require pressure reduction, re-pressure test, or replacement of Class 1 and Class 2 location pipe in the event of certain population growth in order to better protect higher populations located along the pipeline. Within the *special permit segments*, there are approximately 765 dwellings, located within a 660 feet class unit buffer around the *special permit segments* will benefit from increased safety associated with pipe replacement.

The special permit waives the requirement to reduce pressure, re-pressure test, or replace the existing pipe with a stronger pipe in the *special permit segments*. However, the special permit includes conditions to improve safety and environmental protection to equal or exceed that provided by the measures required under 49 CFR 192.611(a) in the *special permit segments* and the *special permit inspection areas*. The special permit conditions include: coating surveys and remediation, corrosion surveys and remediation, damage prevention activities, line of sight markers, inline-tool inspections for threats (corrosion, third party damage, and cracking – pipe body, seam and girth welds), remediation of pipe threats based upon design factor for class location, reassessments based upon integrity management program, procedures, and documentation.

Monthly patrols, weather permitting, are used to observe surface conditions on and adjacent to the pipeline right-of-way for indications of leaks, third party construction activity, exposed pipe, erosion or other factors that affect the safety and operation of the pipeline.

Close interval surveys must be performed on the pipe within the *special permit segments* to ensure cathodic protection (CP) is acceptable. Areas of low CP potentials have been or will be remediated according to the special permit conditions, if the special permit is granted.

CGT must perform Damage Prevention measures as described in the best practices of the Common Ground Alliance (CGA) within the *special permit inspection areas*.

ILI tool inspections must be performed using high-resolution inspection at intervals as specified by 49 CFR Part 192, Subpart O reassessment intervals or the special permit conditions.

Any anomalies detected during in-line inspections must be remediated in accordance with 49 CFR Part 192, Subpart O, and the conditions of the special permit. These activities provide safety and environmental protection in the area of the *special permit segments* and the *special permit inspection areas*.

The special permit requires the pressure testing of each *special permit segment* that has not undergone a 1.25 or greater times MAOP pressure test for eight (8) hours, as required by 49 CFR 192.505(c), 192.611(a), and 192.619(a)(2) or that do not meet 49 CFR 192.517(a)(1) and the traceable, verifiable, and complete requirements of 49 CFR 192.624(a)(1). Successful completion of the pressure tests will ensure that an existing pipeline *special permit segment* has the required safety factor, strength, and injurious flaws. The pressure test will further ensure the safety of the increased population in the vicinity of a *special permit segment*.

Populations living near the *special permit inspection areas* will benefit from a higher level of safety. The safety risk with respect to this request for a special permit focuses on maintaining the integrity of the pipeline and on the risk, it poses to the increased population to mitigate a failure of this pipeline. Granting this special permit does not increase the potential impact radius (PIR (the radius of a circle within which the potential failure of a pipeline could have significant impact on people or property)) of the pipeline. However, the risk from the increased human population around the pipeline would be mitigated through IM procedures. The pipeline integrity attributes (such as pipe diameter, wall thickness, grade, pipe seam type, pressure test, maximum allowable operating pressure, and anomaly findings) for the special permit segment can be reviewed in the Federal Dockets Management System (FDMS) located at www.regulations.gov under the document titled "PHMSA-2019-0201 - CGT - Class 1 to 3 SP Amended Attachment A - Pipeline Segment Integrity Information." Details about the pipeline's integrity and compliance history are provided in the **Special Permit Analysis and Findings (SPAF)** document, which is available in the docket (PHMSA-2019-0201) in the FDMS at www.regulations.gov. The SPAF does not identify any integrity issues (such as pipe body, seam, or girth weld, operational or environmental) that would affect the approval of the special permit with implementation by CGT of conditions to

maintain safety. PHMSA has determined that the pipeline and *special permit segments* are in satisfactory condition for the issuance of the special permit.

The above-described integrity maintenance and monitoring conditions associated with the special permit will not be applicable if PHMSA denied the special permit request, because the safety requirements in 49 CFR Part 192, Subpart O only applies to 39.9 miles of HCAs within each *special permit inspection area*.

These monitoring conditions are intended to provide more information about the condition of the pipe so that any integrity issues can be remediated to avoid risk.

On the other hand, the "No Action" Alternative would require full compliance with 49 CFR 192.611(a). This provision would require the replacement of the existing pipeline with a thicker/stronger pipeline that meets the requirements of 49 CFR 192.611(a) or a new pressure test on some of the *special permit segments* to meet 49 CFR 192.611(a), 192.505(c), and 192.619(a)(2), as applicable. However, the monitoring conditions associated with the special permit will not be applicable if the special permit were denied because those conditions are not mandated by the current 49 CFR Part 192. Accordingly, both alternatives are expected to lead to a similar safety result.

#### (a) Will operation under a special permit change the risk of rupture or failure?

Since the safety risk with respect to the special permit focuses on the integrity of the pipeline and its effect on the increased population in the event of a catastrophic failure of this pipeline, the special permit contains conditions to ensure the safety level meets the requirement of 49 CFR Part 192 in the *special permit inspection areas*. The permit would allow operation at the current pressure (MAOP). Additional inspections would lower the risk of rupture or failure.

# (b) If a failure occurred, will consequences and spill or release volumes be different if PHMSA granted the permit? Will granting this permit increase, decrease, or have no change on the risk of failure?

PHMSA believes that granting the special permit will not increase the risk of failure with implementation of the special permit conditions. The implementation of these practices, in conjunction with increased mitigative measures that are required as per the special permit will

meet or exceed safety and reliability standards of 49 CFR 192.611(a) in the requested *special permit segments* and *special permit inspection areas*.

With the "No Action" Alternative, CGT opted to reduce pressure instead of replacing the pipe, a failure on a reduced-pressure pipeline could result in a smaller volume of natural gas released and a smaller potential impact radius in the event of a rupture. CGT contends that it would not opt to reduce pressure due to ongoing contractual obligations.

# (c) Will the Potential Impact Radius (PIR) of a rupture change under the Special Permit? Please calculate and provide the PIR data, if applicable. Will more people be affected by a failure if PHMSA granted the permit?

The PIR of a rupture will not change if a special permit was granted in comparison to current operating conditions. The PIR would only increase in comparison to a scenario wherein CGT opted to reduce pressure to avoid pipeline segment replacement in areas where class locations have increased. As described previously, CGT states it would not choose to reduce pressure. Consequently, no more people would be affected by a failure if PHMSA granted the permit. The calculated 607 feet, 755 feet, 730 feet, 755 feet, and 894 feet PIRs of the *special permit segments* are determined using the current MAOP.

### (d) Will operation under the Special Permit have any effect on pipeline longevity or reliability? Will there be any life cycle or maintenance issues?

The implementation of increased pipeline assessment within the *special permit inspection area* required in the special permit will improve pipeline reliability and safety in comparison to CGT opting to reduce pressure without requirement to implement the special permit conditions. In addition, the pipelines in *special permit inspection areas* on the CGT system including EL 200, EL 400, ML 100, ML 200, and ML 300 Pipelines have the same characteristics and operate as one system. The MAOP and other factors will not change under the special permit; renewal of the special permit will not impact the overall pipeline longevity or reliability and will not cause any life cycle or maintenance issues. Under the "No Action" Alternative, replacement of the *special permit segments* with new, stronger pipe with modern coating and welds would also benefit pipeline longevity.

*Socioeconomics:* The scope and duration of any activities associated with the *special permit segments* will have no impact on the socioeconomics in the vicinity of the CGT system EL 200, EL 400, ML 100, ML 200, and ML 300 Pipelines. According to US Census data, the unemployment rates in the counties where the *special permit segments* are located are lower than or equal to 10 percent. None of the census block groups have low-income population. The special permit will not disproportionately impact any predominantly low-income populations.

*Topography:* The topography of the *special permit segments* is primarily flat and gently rolling, and is dominated by agriculture fields. Several wetland and waterbody features are present in the vicinity of *special permit inspection areas* in Kentucky. No construction-related activities will occur for the "Selected" Alternative; therefore, the topography in the *special permit segments* will not be affected.

*Transportation:* The *special permit segments* will be accessed by existing roads and right-of-way crossings. No construction-related activities will occur as part of the "Selected" Alternative; therefore, traffic will not increase, and construction of additional roads will not be required.

*Water Resources:* Field surveys determined the *special permit inspection areas* in Lafayette Parish, Louisiana are located within the Chicot Aquifer System, which provides drinking water to the given service area. No water wells were observed within the right-of-way boundary of the *special permit inspection areas*. No exceptional waters, outstanding waters or federally-designated Wild Scenic Rivers were identified in the vicinities of the *special permit inspection areas*. Avoidance of pipeline segment replacement is intended to minimize siltation and runoff to waterbodies in the vicinity of the *special permit segments*.

As a result, CGT does not anticipate any impact to any surface water, wetlands or drinking water aquifers, since if the special permit is granted, no construction-related activities will occur.

#### A. Comparative Environmental Impacts of Alternatives

As PHMSA recognized in its June 29, 2004, Criteria for Class Location Change Waivers, implementing additional preventative and mitigative measures enables a pipeline to improve its knowledge and understanding of the pipeline's integrity, accelerate the identification and repair of actionable anomalies, and better manage and mitigate threats to the public and environment. Implementing enhanced inspection and assessment practices throughout the *special permit*  *segments* and *special permit inspection area*, in lieu of replacing small segments of pipe experiencing the class location change, extends pipeline safety benefits to a much greater area along the pipeline. In addition, avoiding pipe excavation and replacement will minimize costs to the operator, will avoid delivery interruptions and supply shortages, and avert environmental disturbance. All of these benefits will be realized under CGT's requested *special permit segments*. For the "No Action" Alternative, 49 CFR 192.611(a) would require a reduced MAOP and CGT would have to replace the pipe in order to maintain reliable transportation service. However, the monitoring conditions associated with the special permit would not be applicable if the special permit were denied because those conditions are not mandated. Accordingly, both alternatives are expected to lead to a similar safety result.

Because CGT contractual obligations would not allow the operating pressure of the pipe to be lowered, the mode of pipeline failure would be the same whether the pipe operates under a special permit or is replaced. Likewise, human safety would not be affected.

The natural environment would be temporarily disturbed if the pipe is replaced; a special permit would have little to no impact on the environment in the *special permit segments*.

#### X. Consultation and Coordination

CGT and PHMSA personnel involved in preparation of this document include:

#### Personnel from parent owner and operator of CGT:

Scott Currier, Director Integrity, TC Energy Lee Romack, Director Regulatory Compliance, TC Energy

#### **PHMSA**

Amelia Samaras, PHMSA, US DOT Steve Nanney, PHMSA, US DOT Joshua Johnson, PHMSA, US DOT

#### XI. Response to Public Comments Placed on Docket PHMSA-2019-0201

PHMSA published the special permit renewal request in the Federal Register (87 FR 450692) for a 30-day public comment period from August 17, 2022 through September 16, 2022. PHMSA

sought comments on any potential environmental impacts that could result from the selection of either alternative, including the special permit conditions. PHMSA received no comments.

The special permit application from CGT and draft special permit conditions were available in Docket No. PHMSA-2019-0201 at: <u>www.regulations.gov</u> for public review. PHMSA did not receive any comments regarding this special permit request.

#### XII. Finding of No Significant Impact

In consideration of the FEA and the special permit conditions explained above, PHMSA finds that no significant negative impact to human health, safety, or the environment will result from the issuance and full implementation of the above-described special permit to waive the requirements of 49 CFR 192.611(a) for *special permit segments*, which consists of approximately 17.545 miles (92,637 feet) of 24-inch, 30-inch and 36-inch diameter pipelines located in Lafayette and Vermilion Parishes, Louisiana; Alcorn and Union Counties, Mississippi; Macon County, Tennessee; and Carter, Menifee, Montgomery, and Rowan Counties, Kentucky. This special permit will require CGT to implement additional conditions on the operations, maintenance, and integrity management of the *special permit segments* and *special permit inspection areas*.

The granted special permit conditions and SPAF are available in the FDMS Docket No. PHMSA-2019-0201 at: <u>www.regulations.gov</u> for public review.

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#### Completed by PHMSA in Washington, DC on: May 22, 2023



**Attachment B-1 - Special Permit Segments and Inspection Area Route Maps** 



## Attachment B-2 – Special Permit Segments and Inspection Areas Route Maps East Lateral 200 and East Lateral 400 Pipelines

#### Attachment B-3 – Special Permit Segments and Inspection Area Route Maps Main Line 100, 200, & 300 Pipelines





#### Attachment B-4 – Special Permit Segments and Inspection Area Route Maps Main Line 100, 200, & 300 Pipelines



# Attachment B-5 – Special Permit Segments and Inspection Area Route Maps Main Line 100, 200, & 300 Pipelines

Attachment C-1 – Route Maps East Lateral 200 and East Lateral 400 Pipelines - Special Permit Segments



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Attachment C-2 – Route Maps East Lateral 200 and East Lateral 400 Pipelines - Special Permit Segments



Attachment C-3 – Route Maps East Lateral 200 and East Lateral 400 Pipelines - Special Permit Segments



#### Attachment C-4 – Route Maps

#### Main Line 100, 200, & 300 Pipelines - Special Permit Segments



## Attachment C-5 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments



#### Attachment C-6 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments





E 660ft Boundary

HCA Locations

Attachment C-7 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments

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# Attachment C-8 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments





## Attachment C-9 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments





# Attachment C-10 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments



# **Attachment C-11 – Route Maps** Main Line 100, 200, & 300 Pipelines - Special Permit Segments



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# Attachment C-12 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments





# Attachment C-13 – Route Maps Main Line 100, 200, & 300 Pipelines - Special Permit Segments



The granted special permit with conditions granted to CGT for Docket No. PHMSA-2019-0201 can be found the Federal Dockets Management System located on the internet at <u>www.regulations.gov</u> or on the PHMSA website for special permits issued at <u>https://www.phmsa.dot.gov/pipeline/special-permits-state-waivers/special-permits-issued.</u>

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